REMARKS

Claims 1-17 are pending in the application.

The specification is amended on pages 2 and 5 to provide a more accurate translation for "strömungsgeschwindigkeit" by replacing "flow rate" with "flow velocity."

Claims 1, 3, 7, 9, 10, and 13-15 are amended to specify that the linking channel (3) is a common linking channel separated into two or more part channels only by microstructure units immediately before opening into the mixing zone. The amended claim language makes clear that the linking channel is a single (common) channel that is divided only at a single location by microstructures.

Support for this amendment may be found throughout the specification. For example, support may be found on page 2, in the last complete paragraph, which describes part channels as the "division of the feed stream into part streams by built-in microstructure parts just before the outflow of said feed stream into the mixing zone." Further support may be found in all of the examples in the specification, which show one or more outlet opening(s) (4) in fluid communication with one or more inlet openings (2) though a single and same (common) linking channel (3).

No new matter is added.

Claims Rejections 35 U.S.C. 103

Claims 1-15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ehrfeld** et al. (US 2003/0039169 A1). Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Ehrfeld** in view of **Ashmead** (US 5,534,328). The Examiner's rejections have been carefully considered.

Applicant argues that claims 1-15 and 17 are patentable over Ehrfeld because Ehrfeld does not teach or suggest one or more inlet openings in fluid communication with one or more outlet openings through a common linking channel that is separated only by microstructure units that divide the common linking channel into two or more part channels immediately before opening into a mixing zone.

The present claims are amended to recite a common (i.e. single) linking channel divided only by microstructure units (6) into two or more part channels (7) immediately before opening into the mixing zone (5). As a consequence, all of the partial channel outlets that receive a feed stream from the same inlet port, receive the feed stream through the same (common) linking channel.

Ehrfeld teaches a micromixer comprising one or more symmetrical bifurcation cascades comprising at least two stages of bifurcation (abstract and [0012]). This structure correlates with the function of providing identical volumetric flows for each fluid at the respective microchannel outflows.

The rejection cites figure 3a in Ehrfeld as teaching a static micromixer in the form of a disk comprising at least one inlet opening (4b) for the introduction of at least one feed stream into a linking channel (31-32-33). Paragraph 4 in the response to Applicant's arguments filed 24 June 2009 indicates that each leg of channels 32 may reasonably be considered a separate channel and that each channel may be identified as different from the other.

As indicated by the Examiner, Ehrfeld teaches a plurality of separate microchannels linking an inlet opening with an outlet opening and not a common linking channel that connects all of the outlets with the same feed stream inlet. Figure 3(a) in Ehrfeld shows that a feed stream entering inlet opening (4b) is sequentially divided in stages before reaching a plurality of outlets to a mixing zone. The presently claimed

invention, in contrast, comprises a common linking channel divided only immediately before opening into the mixing zone by microstructure units.

The differences between the structures taught by Ehrfeld and the structures recited in the claims, as amended, translate into functional differences. As indicated on pages 2 and 5 in the present specification, the flow velocity of the feed stream is increased when the feed stream passes between the microstructure units immediately before opening into the mixing zone. The structure taught by Ehrfeld requires sequential bifurcation to provide equal flow rates at all of the inlets into the mixing chamber.

The micromixer taught by Ehrfeld requires at least two stages of bifurcations in fluid streams leading to a mixing zone (abstract). The sequential bifurcation of a channel into a plurality of distinct microchannels before outflow into a mixing zone cannot reasonably be equated with a single channel that is divided into a plurality of part channels by microstructures just before outflow into a mixing zone. A "bifurcation" as described Ehrfeld is clearly the separation of one channel into two channels. As such, a "bifurcation" cannot be confused with a "microstructure unit." Similarly, daughter "channels" formed by the bifurcation of a parent channel, as described in Ehrfeld, cannot be confused with "part channels" formed by microstructure units at the opening of a channel into a mixing zone, as described in the present specification.

Regarding Claim 10, which recites, in part, the limitation that each inlet opening (2) is connected with the mixing zone (5) through one common linking channel, Applicant points out Figure 3(a) in Ehrfeld does not teach the claimed structure. Each inlet opening in Figure 3(a) is clearly shown as connected with the mixing zone through more than one (at least 4) linking channels.

Regarding claim 16, Applicant argues that Ashmead does not remedy the failure of Ehrfeld to teach or suggest the limitations recited in claims 1 and 13, as amended.

In view of the amendment to the claims and the foregoing arguments, Applicant respectfully requests that the rejections of claims 1-17 under 35 U.S.C. 103(a) be withdrawn.

Conclusion

The application in its amended state is believed to be in condition for allowance. Action to this end is courteously solicited. Should the Examiner have any further comments or suggestions, the undersigned would very much welcome a telephone call in order to discuss appropriate claim language that will place the application into condition for allowance.

Respectfully Submitted,

/Michael J. Striker/

Michael J. Striker
Attorney for Applicant
Reg. No.: 27233
103 East Neck Road
Huntington, New York 11743
631-549-4700